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(71) Applicant *(for all designated States except US)*: **DYNAMIC FLUID CONTROL (PTY) LTD** [ZA/ZA]; 32 Lincoln Road, Industrial Sites, 1501 Benoni South (ZA).

(72) Inventor; and

(75) Inventor/Applicant *(for US only)*: **MULLER, Michael, Paul** [ZA/AU]; 40 Warren Avenue, Avola Beach, New South Wales, 2251 (AU).

(74) Agents: **COCHRANE, David, Hylton** et al.; Spoor and Fisher, P O Box 41312, 2024 Craighall (ZA).

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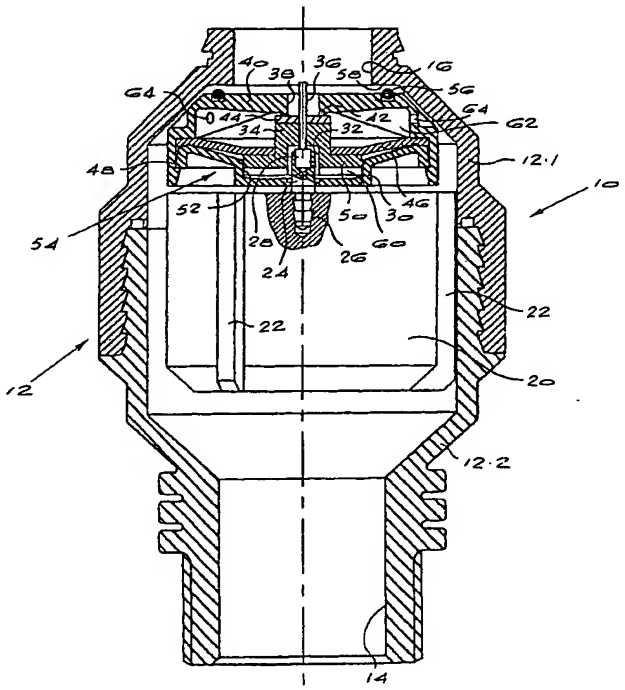
(54) Title: VENT VALVE



(57) Abstract: The invention concerns an air transfer valve which automatically vents accumulated air from pressurized liquid reticulation pipelines or vessels. The valve (10) has a housing (12) which is connectable to the pipeline or vessel. The housing has a first outlet (38) venting to atmosphere and a control chamber (60) which is exposed to internal pressure in the housing via a control chamber inlet. A first valve closure (34) can move to open and close the first outlet. This valve closure is exposed to control chamber pressure tending to move it to close the first outlet and to internal housing pressure tending to move it to open the first outlet. When the housing is pressurized the first valve closure (34) is maintained in a closed position by virtue of an unbalanced pressure force acting on it that is attributable to exposure of the valve closure to atmosphere through the first outlet. There is also a control chamber outlet (36) from the control chamber (60) to atmosphere. This outlet is larger than the control chamber inlet. The valve also incorporates a float (20) in the housing (12) which is arranged to be buoyed up by liquid entering the housing from the pipeline and a second valve closure (24) carried by the float which is arranged to open and close the control chamber outlet (36) in response to movement of the float caused by variations in the level of liquid in the housing. Downward movement of the float (20) in response to a drop in liquid level in the housing (12), attributable to accumulation of air in the housing, causes the second valve closure (24) to open the control chamber outlet (36). This allows the control chamber (60) to vent to atmosphere. The pressure in the control chamber (60) drops relative to the internal housing pressure and creates an unbalanced pressure force on the valve closure (34) which causes it to open the outlet (38). The housing can then vent to atmosphere via the outlet (38).

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